

Healthcare Provider Adult/Child One-Rescuer CPR Based upon the AHA Guidelines 2005

1	Be sure the scene is safe. Check for response	Tap the victim. Ask if the person is OK? Speak loudly and clearly.
2	Activate emergency response/tell someone to call 911 and get the AED.	Direct someone to perform BOTH actions.
3	Open the airway using a head tilt-chin lift for non accident victim.	Place palm of one hand on the forehead and push backward. Place several fingers of other hand under the bony part of the lower jaw to lift the chin.
4	Check Breathing	Place your ear over the victim's nose and mouth. Look for the rise and fall of the chest. Listen for breathing sounds; feel for exhaled air on your cheek. (5 – 10 seconds)
5	Give two breaths (one second each)	Pinch nose and breathe into the victim's mouth. If you have a pocket mask, place it properly on the victim's face; seal your mouth around the one-way valve of pocket mask and exhale into it. Look for the chest to rise. If no chest rise, reposition the airway and try again.
6	Check carotid pulse	Maintain head tilt with one hand. Place 2 or 3 fingers of the other hand on Adam's apple (windpipe) and slip 2 or 3 fingers into the groove between Adam's apple and muscles on the side of the neck nearest you. (5 – 10 seconds)
7	Locate CPR hand position	Place heel of one hand in the center of chest, between the nipples. Place the other hand on top of the first hand (or use the second hand to grasp wrist of first hand.) Extend or interlace fingers, but keep them off the chest.
8	Begin CPR. Deliver five cycles of 30 compressions at the rate of 100 per minute and 2 breaths.	Kneel at the victim's side and place hands in proper place on sternum. Give 30 compressions in less than 23 seconds. Push hard; push fast; allow chest to return to normal position (recoil) between compressions. Give 5 cycles of 30 compressions and 2 breaths which will take about 2 minutes.
9	Continue CPR	If you are alone, continue CPR until the EMS arrives or the victim begins to move.
10	If a second rescuer is able to help you – begin two-rescuer CPR	If another trained rescuer can join you for two-rescuer CPR, then perform with 30 compressions – 2 breaths for an <u>adult</u> . Switch to <u>15 compressions and 2 breaths for a child from one year of age to puberty.</u>
11	If the victim begins to move	If the victim begins to move, check the pulse. If there is a pulse, open the airway and check for breathing. If no breathing, begin rescue breathing. (one breath every 5 – 6 seconds or 10 to 12 breaths per min.
12	If Breathing and Pulse Return and there is no trauma	Place victim into the recovery position. Monitor breathing and pulse. Rotate to other side after 30 minutes until EMS arrives to prevent nerve and vessel injury.

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Adult Chain of Survival: Early Access to 911; Early CPR, Early Defibrillation, Early Advanced Care

Adult Two-Rescuer CPR with AED

Based upon the AHA Guidelines 2005

Always be sure that the scene is safe for you and the victim before proceeding to help.		
A healthcare provider is performing CPR and you arrive with an AED. Compressor continues to perform chest compression until the AED is ready to analyze.		
1	Turn AED on (Press Power Key)	Power button to turn AED on (or make sure that AED case is open if your AED has an automatic ON feature).
2	Select proper pads and place pads correctly	Know the difference between adult and pediatric pads. Select the proper size for the victim, and apply to pads to the chest as shown on the diagrams. Never use child pads on an adult. Pads should not touch each other or overlap.
3	Shout "Clear" to analyze the victim	Clear the victim along with a verbal indication of clearing the victim such as "I'm clear, you're clear, everybody's clear!" Or simply shout "Clear" with an obvious gesture to others that they are all clear and not touching the victim.
4	Clear victim to shock/press shock button	After clearing the victim, press the shock button when prompted and after clearing.
5	Resume CPR starting with chest compressions after 1 shock	Follow AED prompts to resume CPR by getting into proper position, placing hands in proper place on the chest, and begin chest compressions.
6	Deliver 5 cycles of 30 compressions at 100 per minute and 2 breaths after each set of 30 compressions	Kneel alongside victim and place hands in proper place on sternum. Give 30 compressions in less than 23 seconds. (rate of 100 per min). Push hard; push fast; allow chest to return to normal position (recoil) between compressions. 5 cycles of 30 compressions and 2 breaths will take about 2 minutes.
7	Pause to allow other rescuer to give 2 breaths	Pause compressions to allow 2 nd rescuer above the victim's head to give 2 breaths with bag mask device. Chest should rise each time.
Rescuers switch places with little interruption. Compressor takes over breathing using bag mask. Other rescuer who used the bag mask now takes over compressions.		

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One and Two-Rescuer Child CPR with AED (2005 Guidelines)

Always be sure that the scene is safe for you and the victim before proceeding to help.		
<p>You as a lone rescuer find a child (age one to onset of puberty) who is in cardiac arrest (not responsive, no breathing, and no pulse – or pulse rate is less than 60 beats per minute). If you are alone, begin CPR (30:2) for two minutes; then leave to call 911 and get the AED. If you are alone and witness the collapse, activate 911 and get the AED before starting CPR. Return to the victim and proceed as follows.</p>		
1	Turn AED on	Press button to turn AED on (or make sure that AED case is open if your AED has an automatic ON feature).
2	Select proper pads and place pads correctly	Know the difference between adult and pediatric pads. Select the proper size for the victim, and apply to pads to the chest as shown on the diagrams. If child pads are not available, adult pads may be used on a child and placed on the chest the same as the adult. Pads should not overlap or touch each other.
3	Shout “Clear” to analyze the victim	Clear the victim along with a verbal indication of clearing such as, “I’m clear, you’re clear, everybody’s clear!” Or simply shout “Clear” with an obvious gesture to others that they are all clear and not touching the victim.
4	Clear victim to shock/press shock button	After clearing the victim, press the shock button when prompted and after clearing.
5	Resume CPR starting with chest compressions after 1 shock	Follow AED prompts to resume CPR by getting into proper position, placing hands in proper place on the chest, and beginning chest compressions. (30:2)
Second rescuer arrives and takes over chest compressions.		
6	Deliver 10 cycles of 15 compressions and 2 breaths at the rate of 100 compressions per minute.	Kneel alongside victim and place hands in proper place on sternum. Give 15 compressions (rate of 100 per min). Push hard; push fast; allow chest to return to normal position (recoil) between compressions. 10 cycles of 15 compressions and 2 breaths will take about 2 minutes.
7	Pause to allow other rescuer to give 2 breaths (each breath is 1 second)	Pause compressions to allow 2 nd rescuer above the victim’s head to give 2 breaths with bag mask device. Chest should rise each time.
<p>Rescuers switch places with little interruption. Compressor takes over breathing using bag mask. Other rescuer who used the bag mask now takes over compressions. Continue until the EMS arrives to take over or the victim begins to move. Rescuers should switch positions after every 10 cycles with the least amount of interruption to minimize compressor fatigue.</p>		

BLS for Healthcare Providers
Infant (Birth to One Year Old) One and Two-Rescuer CPR
Based upon the AHA Guidelines 2005

1	Check for scene safety Check for response	Tap infant and shout loudly. "Are you OK?" You may also tap the bottom of a foot.
2	Activate emergency response	Tell bystander (if available) to activate appropriate emergency response (911)
3	Open airway using head tilt-chin-lift	With the heel of your hand, push back on forehead, place fingers of other hand on the bony part of the infant's chin and lift it upward. Do not press the soft tissues of the neck or under the chin. Lift the jaw upward by bringing the chin forward. Do NOT hyperextend the neck.
4	Check breathing Look/Listen/Feel	Place your ear over victim's nose and mouth. Look for rise and fall of chest. Listen for breathing sounds; feel for exhaled air on your cheek. (5 – 10 seconds)
5	Not breathing? Give 2 breaths (1 second each) with visible chest rise using whichever technique works best for you. Pocket Mask or (Mouth-to-Mouth and Nose) (Mouth-to-Nose Only) or (Mouth-to-Mouth Only)	Use pocket mask; seal mouth around the tube of pocket max and breathe into mask. Each breath should take approximately 1 second each. Chest should rise after each breath. If you do not have a pocket mask available, give breaths by covering the infant's mouth and nose with your mouth. Be sure that you have a good seal. If you cannot successfully breathe via the mouth to nose technique, close the mouth and breathe through the nose; if necessary, pinch the nose and breathe into the mouth of a larger infant.
6	Check brachial pulse	Place your thumb on the outside of the infant's mid upper arm closest to you, using the fingers to feel the brachial pulse between the biceps muscle and the humerus. Feel with a gentle touch for at least 5 seconds, but no more than 10 seconds. Maintain head tilt. If no pulse, go to step 7.
7	Locate CPR finger position	Place 2 fingers on the sternum (breastbone) just below the nipple line.
8	Deliver 30 chest compressions at the rate of 100 per minute	Give 30 compressions in less than 23 seconds. Push hard, push fast, approximately 1/3 – 1/2 the depth of the chest; allow chest to return to normal position (recoil) between compressions.
9	Give 2 breaths (1 second each). Chest must rise each time	Use pocket mask; seal mouth around tube of pocket mask and exhale into mask. Your exhaled breaths should take approximately 1 second each. Visible chest rise occurs twice. Take no more than 10 second to accomplish 2 breaths.
10	Deliver second cycle of 15 compressions using 2-thumbs-encircling hands technique	Rescuer at the chest will compress chest with 2-thumbs-hands encircling chest technique over lower 1/2 of sternum (below nipple line). Form a "V" with your two thumbs on the breastbone below the nipple line. You may also place one of your thumbs on top of the other to avoid pressing on the ribs. Give 15 compressions.
11	Pause to allow 2 nd rescuer to give 2 breaths	Pause compressions to allow 2 nd rescuer to give 2 breaths with bag mask.
12	Deliver third cycle of 15 compressions of adequate depth with full chest recoil.	Push hard, push fast (rate of 100 per min); allow full chest recoil (allow the chest to return to its normal position) between compressions. Ratio for two healthcare provider rescuers is 15 compressions to 2 breaths.
13	Pause to allow 2 nd rescuer to give 2 breaths	Pause compressions to allow 2 nd rescuer to give 2 breaths with bag mask device.
After two minutes (5 cycles) switch places with little interruption. You take over breathing using bag mask. Do 5 more cycles of CPR (15:2). Switch compressor/ventilator tasks every two minutes. Continue until EMS arrives and is ready to take over -- or victim begins to move.		

Pediatric Chain of Survival

1. Prevention of accidents/injury
2. Early CPR
3. Early Access to 911
4. Early Advanced Care

Healthcare Provider Obstructed Airway for Adult/Child Responsive and Unresponsive (Guidelines 2005)

Responsive Choking: Rescuer observes victim for mild or severe airway obstruction. If victim can cough forcefully and/or speak, encourage him/her to keep coughing. Rescuer asks the victim if he/she is choking; "Are you choking?" If victim nods "yes," rescuer states "I am trained to help you. May I help you?" If possible, have bystander call 911.
Rescuer stands behind adult victim with one foot between victim's feet; rescuer kneels behind a smaller victim or child. Rescuer finds proper location above victim's navel, but well below the breastbone. Grasp fist that is in position with other hand. Perform separate and distinct upward abdominal thrusts (Heimlich Maneuver) until object is expelled or victim becomes unresponsive. (Heimlich Maneuver) Be sure to pause slightly between abdominal thrusts to make them separate/distinct.
Pregnant or Obese Victim; Rescuer performs chest thrusts instead of abdominal thrusts. Rescuer's arms are under victim's armpits encircling the chest. Perform separate and distinct backward chest thrusts between nipples.
If obstruction is expelled, have victim seek medical attention to assess possible injury to the ribs, abdomen, or throat
Victim becomes unresponsive: Activate 911 Designate a bystander to call 911. (If alone, rescuer calls 911)
Start CPR. Open the mouth widely to look into the mouth/throat. If you see the object, remove it. If you don't see it, attempt to give a breath. If the breath does not go in and cause the chest to rise, reposition airway and try to ventilate again. If unable to ventilate – go to the next step.
Perform 5 cycles of 30 compressions and 2 breaths – push hard; push fast at the rate of 100 compressions per minute. Continue CPR until the EMS arrives or the object is successfully removed.
When obstruction is removed: Attempt to ventilate. If air enters (chest rises and falls), give a second breath. If two successful breaths cause a visible chest rise, go to the next step.
Check for a pulse: (keep one hand on forehead while feeling for the carotid pulse in the neck). Allow between 5 and 10 seconds.
Depending upon results – Perform whatever rescue support is needed.
If there is no pulse, perform CPR
If there is a pulse, but no breathing, begin rescue breathing – one breath every 5 to 6 seconds (10-12 breaths per min)
If pulse and breathing are present and there is no suspected trauma, place the victim into the Recovery Position.
Recovery Position: Roll the victim as a unit onto his/her side toward you protecting the head and neck. Support the victim's head on his/her arm which is now extended above the head. Bend the legs to support the body. This procedure protects the victim's airway from possible complications of aspiration due to vomiting. Monitor the victim's breathing/pulse while waiting for help. If help does not arrive within 30 minutes, turn the victim carefully to the other side to prevent nerve and vessel damage.

Points to Remember

- Many victims are embarrassed and will try to conceal the fact that they are choking. They often go to a restroom where they collapse and die. Follow him/her and try to help.

Alcohol is a high risk factor for choking episodes. It depresses the central nervous system.

Loose or ill-fitting dentures may contribute to choking.

Avoid talking and laughing while eating. Chew slowly and thoroughly.

High Risk foods (especially for the pediatric age group) are hot dogs, grapes, nuts, popcorn, etc.)

Infant Obstructed Airway Birth to One Year Old Responsive and Unresponsive Obstructed Airway Based upon the AHA 2005 Guidelines

Responsive Choking: Rescuer determines if infant is choking; Observe for mild or severe breathing difficulty. If infant is obstructed, have a bystander call 911, if available. Continue to next step.
While sitting or kneeling, rescuer positions infant over your arm, head lower than feet, with arm supported on downward thigh.
Give up to 5 back blows between the shoulder blades with the heel of your hand. Deliver separate and distinct back blows. (Your AHA textbook refers to the back blows as "back slaps." If object is not expelled, go to next step.
Give up to 5 chest thrusts (same chest location as for CPR, one finger's width below nipple line.) Use two fingers.
Repeat series of back blows and chest thrusts until obstruction is expelled, or infant becomes unresponsive.
If object is expelled, seek medical attention to assess possible injury to the ribs or throat
If Infant becomes unresponsive: Designate a bystander to call 911, if available. If you are alone, you will begin CPR with the added step of looking into the mouth for an object before attempting to breathe.
Rescuer begins CPR. Place the infant on a firm, flat surface. Open the mouth to look for an object that you can see. If you see it, carefully remove it.
If you don't see the object and/or nothing is removed – Attempt to ventilate; if unsuccessful, reposition airway and try to ventilate again. If unable to ventilate – go to the next step
Give 5 cycles of 30 chest compressions and 2 breaths. Note: look into mouth each time for object before attempting to breathe. Call 911 after performing two minutes of CPR. You may carry the infant with you to the phone.
If you see an obstruction, remove it. Open the airway and attempt to ventilate. If air enters (chest rises and falls), give a second breath. If two successful breaths cause a visible chest rise, go to the next step.
Check for the brachial pulse in the mid upper arm closest to you. With your thumb on the outside of the infant's upper arm, place two or three fingers on the inside part of the upper arm between the elbow and armpit to feel the pulse. Allow between 5 – 10 seconds. Keep your other hand on the forehead to maintain the head tilt. Perform CPR if you don't feel a pulse or it is less than 60 beats per minute.
Depending upon results – Perform whatever rescue support is needed. Go to the following next steps.
If the pulse is present, check for breathing. If there is no normal breathing, begin rescue breathing (1 breath every 3 to 5 seconds which is about 12 – 20 breaths per minute).
If the pulse is present and the infant is breathing adequately, keep the airway open the with a head tilt/chin. If there is suspected cervical spine injury, maintain victim supine with head stabilized (no head tilt).
The recovery position is not recommended for small children or for infants since they cannot be satisfactorily stabilized.

Pediatric Safety

Pediatric Chain of Survival: Prevention of Accidents/ Injuries Early CPR Early 911 Advanced Care

Car Safety – Seat Belts/Car Seats, Infants and children 12 years of age and younger should ride in the back seat with proper restraints

Indoor Safety – Clear exits, working fire extinguisher, smoke detectors, emergency phone numbers placed on phones, poisonous substances, medicines and chemicals in high, locked cabinets. Safety latches on cabinets, commodes, approved gates at stairways. Safe furniture, no sharp corners. Covered electrical outlets. Water heater set no higher than 120 degrees. Poisonous plants out of reach.

Kitchen Safety – Hot pots/pans, electrical cords out of reach. Teach meaning of hot. Supervise at all times.

Bathroom Safety – Never leave infant/child in water unsupervised. Medicines, cosmetics out of reach.

Outdoor Safety – Playground equipment should be safe in and working order. Supervised. Roller-skating/protective pads

Firearms – Guns, ammunition locked away. Ammunition kept separately. Trigger lock.

Bicycle Safety – Helmets, bikes proper size for child.

Pool Safety – Locked fence around pool. Supervise at all times. Teach children to swim at an early age.

Warning Signs – Heart Attack and Stroke

January 2006

The following information is from the American Heart Association Website
www.americanheart.org

Act in Time

The American Heart Association and the National Heart, Lung, and Blood Institute have launched a new "Act in Time" campaign to increase people's awareness of heart attack and the importance of calling 9-1-1 immediately at the onset of heart attack symptoms.



Dial 9-1-1 Fast

Heart attack and stroke are life-and-death emergencies -- every second counts. If you see or have any of the listed symptoms, immediately call 9-1-1. Not all these signs occur in every heart attack or stroke. Sometimes they go away and return. If some occur, get help fast! Today heart attack and stroke victims can benefit from new medications and treatments unavailable to patients in years past. For example, clot-busting drugs can stop some heart attacks and strokes in progress, reducing disability and saving lives. But to be effective, these drugs must be given relatively quickly after heart attack or stroke symptoms first appear. So again, don't delay -- get help right away!

Statistics

Coronary heart disease is America's No. 1 killer. Stroke is No. 3 and a leading cause of serious disability. That's why it's so important to reduce your risk factors, know the warning signs, and know how to respond quickly and properly if warning signs occur.



Heart Attack Warning Signs

Some heart attacks are sudden and intense — the "movie heart attack," where no one doubts what's happening. But most heart attacks start slowly, with mild pain or discomfort. Often people affected aren't sure what's wrong and wait too long before getting help. Here are signs that can mean a heart attack is happening:

- **Chest discomfort.** Most heart attacks involve discomfort in the center of the chest that lasts more than a few minutes, or that goes away and comes back. It can feel like uncomfortable pressure, squeezing, fullness or pain.
- **Discomfort in other areas of the upper body.** Symptoms can include pain or discomfort in one or both arms, the back, neck, jaw or stomach.
- **Shortness of breath.** May occur with or without chest discomfort.
- **Other signs:** These may include breaking out in a cold sweat, nausea or lightheadedness

As with men, women's most common heart attack symptom is chest pain or discomfort. But women are somewhat more likely than men to experience some of the other common symptoms, particularly shortness of breath, nausea/vomiting, and back or jaw pain.

If you or someone you're with has chest discomfort, especially with one or more of the other signs, don't wait longer than a few minutes (no more than 5) before calling for help. Call 9-1-1... Get to a hospital right away.

Calling 9-1-1 is almost always the fastest way to get lifesaving treatment. Emergency medical services staff can begin treatment when they arrive -- up to an hour sooner than if someone gets to the hospital by car. The staff is also trained to revive someone whose heart has stopped. Patients with chest pain who arrive by ambulance usually receive faster treatment at the hospital, too.

If you can't access the emergency medical services (EMS), have someone drive you to the hospital right away. If you're the one having symptoms, don't drive yourself, unless you have absolutely no other option.



Stroke Warning Signs

The American Stroke Association says these are the warning signs of stroke:

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden, severe headache with no known cause

If you or someone with you has one or more of these signs, don't delay! Immediately call 9-1-1 or the emergency medical services (EMS) number so an ambulance (ideally with advanced life support) can be sent for you. Also, check the time so you'll know when the first symptoms appeared. It's very important to take immediate action. If given within three hours of the start of symptoms, a clot-busting drug can reduce long-term disability for the most common type of stroke.

Cardiac arrest strikes immediately and without warning. Here are the signs:

- Sudden loss of responsiveness. No response to gentle shaking.
- No normal breathing. The victim does not take a normal breath when you check for several seconds.
- No signs of circulation. No movement or coughing.

If cardiac arrest occurs, call 9-1-1 and begin CPR immediately. If an automated external defibrillator (AED) is available and someone trained to use it is nearby, involve them.